



Greening Headquarters Update

FALL 2011

Greening Updates:

Office of Operations

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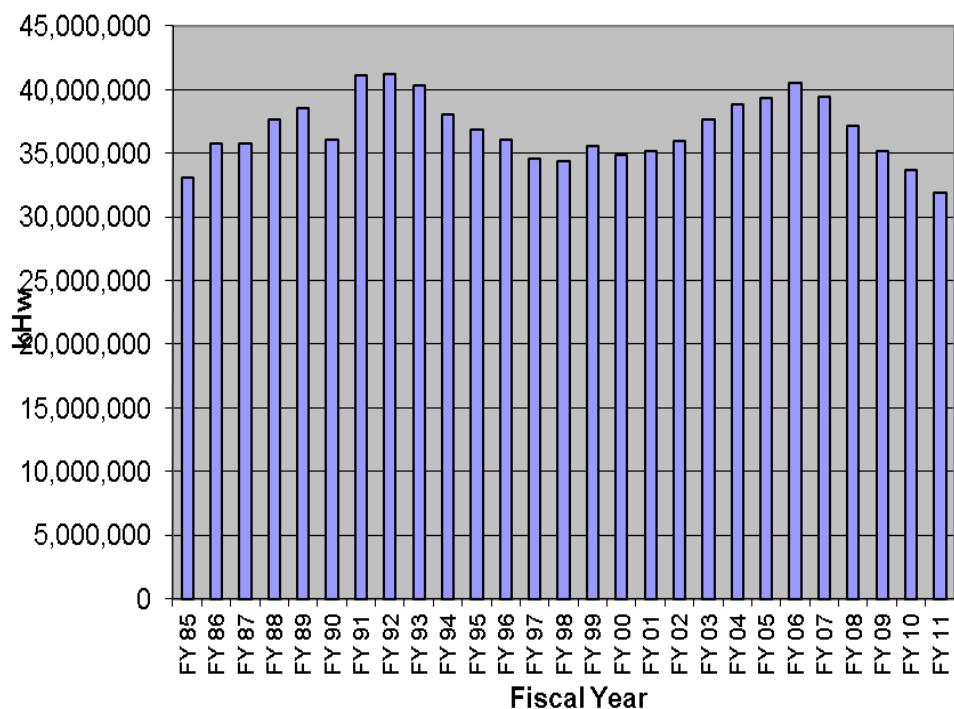
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Headquarters' Energy Management Updates

Energy Use for FY 2011

In spite of the hottest month on record (July) and "Snowmeggadon," in FY 2011 our utility use declined by 6%. The President has directed USDA and the other Federal Departments and Agencies to reduce our utilities by 3% each year, so we exceeded our energy reduction goals this year. The energy use reductions were due in large part to tighter operations, energy efficiency projects and efforts by the OCIO to implement their Green IT Strategic Plan.

Headquarters Electric Use





**More LED
lights are
coming soon!**

The Headquarters Energy Management Team is now planning for FY 2012. The Chiller Plant Renovation has been completed. The chilled water plant energy efficiency upgrades are important because the plant is a major user of electricity. In FY 2012 we will be “commissioning” the system to ensure that it operates efficiently and reliably. The project included a new energy efficient chiller, “free cooling” capabilities during cooler weather, and new automation computer controls.

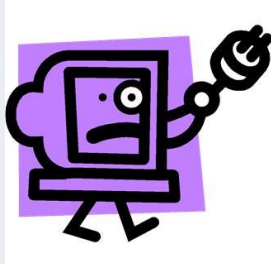
New Look of Light Bulbs – The Phase Out of Incandescent Light Bulbs

Energy Independence and Security Act (EISA) of 2007 requires many general-purpose light bulbs be 30% more energy efficient (similar to current [halogen lamps](#)) than then-current incandescent bulbs by 2012 to 2014.

Starting in January 2012, 100 watt incandescent light bulbs will be phased out unless manufacturers improve the bulb’s efficiency by the 30% EISA mandate. As a result of this looming phase out of incandescent bulbs, there have been rapid developments in energy efficient light bulbs, particularly with bulbs using light emitting diode (LED) technology. Not only do LED bulbs use less electricity than both incandescent and compact fluorescent lights, they have a rated life of 50,000 hours.



Unlike incandescent light bulbs, the new energy efficient bulbs are also designed to provide a wide range of colors (cool, warm, and white light). Consumers will need to become educated shoppers when buying bulbs, or they may be dissatisfied with the new light bulbs.



**Forest Service
unplugs in
August!**

During October (Energy Awareness Month), the Office of Operations Energy Team will be staffing information tables to talk about lighting and how employees can save energy and money at work and at home.

The Results of Forest Service's Yates Building Power IT Down Day

The Forest Service Sustainable Operations staff worked with the Yates building managers and their OCIO staff to conduct a Power IT Down Day in August. The results are in and they are impressive. The Yates Building used **70% less power** over the "Power IT Down" weekend than it used on the same weekend the previous year.

The Power IT Down event for the Yates Building alone saved 15,755 kWh of electricity and avoided 10.9 tons of CO2 emissions. That energy savings is equal to saving 1,220 gallons of gasoline or 453 propane cylinders! All this while saving \$2,100 in utility costs over the Power IT Down weekend.

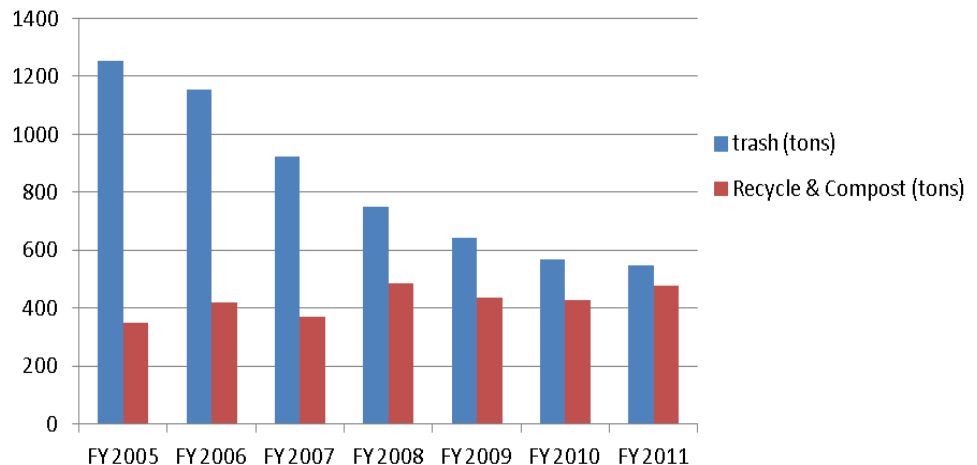
Waste Minimization & Recycling Updates

The trend of reducing waste in the Headquarters continues. The data is not all in yet, but we are projecting that we will see at least a 20 ton (4 %) reduction in the amount of trash generated and a 50 ton increase in the amount of waste that was either collected for recycling or composting in FY 2011. The overall amount of waste was up modestly this year. With Wing 5 opened for occupancy in the spring, the building is now fully occupied, the first time in many years. With more occupants, more waste is generated. The President has mandated that USDA divert 50% of its waste from the trash stream. At this time the Headquarters' diversion rate is close to 70%. The Headquarters Green Team will be staffing information tables in November to talk to employees about recycling at work and at home.



**Remember to
always
recycle!**

Trash & Recycle Trends FY 2005 to FY 2011



Green Buildings

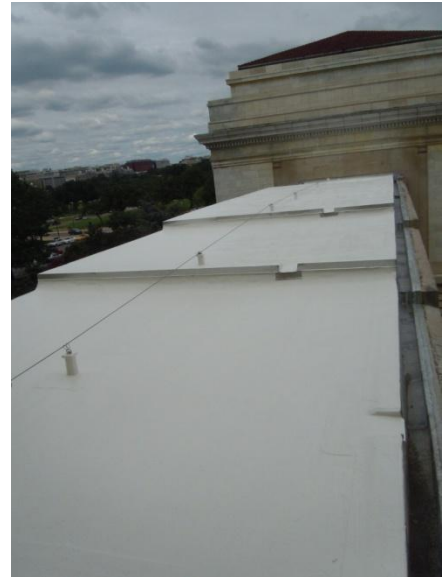
New Cool Roofs at USDA Headquarters, Washington D.C.

As mentioned in our last issue of Greening the USDA Headquarters Complex, there has been a lot of construction activity on the East and West Arches over Independence Ave. The Office of Operations' Engineering Staff is in the final stages of installing "cool" roofing systems that will replace the old, leaky arch roofs. The new cool roofs do more than just keep the roofs watertight. Cool roofs are light colored roofs designed to reflect radiant heat from the roof instead of absorbing it. The roofing also used a bio-based roof coating, helping demonstrate USDA's commitment to the **USDA BioPreferred Program**. The roof coating is Energy Star® qualified. Cool Roofs, therefore, help save energy and reduce heat island effects in urban areas.

HQ Complex Green Cool Roof Pictures



**New Green
Cool Roofs can
save energy!**



Interesting USDA Information

***Did you know that used veggie oils from the USDA
Headquarters Cafeterias get converted to biofuel? A
100 gallons of veggie oil can make 70 gallons of
biofuel.***



H.Q. Green Lunch Bag Events



Folks attending Session 2 in our Green Bag Lunch series on August 16 learned about what we do at USDA Headquarters to reduce energy cost and what they could do at home to save on energy costs.

At the USDA Headquarters, we use various strategies to reduce our electric costs. With deregulation and new “smart grid” technologies, we now have new opportunities to reduce our utility costs. “Smart Grid” technologies, like advanced meters, allow us to monitor electrical usage and share information using two-way communications with our service provider. Sophisticated software allows us to implement a “Demand Management Program.” When the energy demand is high, service providers pay incentives to those who can reduce their energy. This Energy Management program not only provides financial advantages to USDA, but also helps create an affordable and reliable power infrastructure for the region.



***Join us for our
next Green
Bag Lunch
in October
18 at the
South
Cafeteria
back room.***

USDA Lease Consolidation, Sustainability and the New Patriots Plaza III



***Consolidated
leasing is a
USDA
priority***

The consolidation of leases in the National Capital Region (NCR) has been a USDA priority for several years. In FY 2010, USDA employees from five NCR leased locations began moving into the Patriots Plaza III office building. This consolidation effort is a major step forward in creating a more financially and environmentally sustainable USDA. By consolidating leases at Patriots Plaza III, USDA will be able to realize savings by allowing agencies to share conference/training facilities, building management/operations support, main/shipping and receiving, and official parking at one single location. USDA is expecting to save \$90 million over 15 years. The Office of Operations' Space and Asset Management will manage these shared services. Patriots Plaza III is a 380,000 square foot Class A building (USDA is leasing 330,000 square feet, nearly the size of the Jamie L. Whitten Building) that was designed and constructed to meet the U.S. Green Building Council's Leadership in Environmental and Energy Design (LEED) Gold standards for new construction. Some of the "green" features include electricity from renewable sources and an irrigation



***USDA
procures
sustainable
building
leases.***

system that uses no potable water. The complete list of these features is listed below. The “green” building will, therefore, not only save money, but also help USDA meet the President’s mandate in E.O. 13514 that requires Federal agencies to procure sustainable building leases. In addition to being a “green” building, the building meets post-Oklahoma City and 9-11 security standards, including blast resistant glass and a hardened structure and façade.

- Use of high albedo paving materials to reduce heat island effect at the building and the site
- Tenant guidelines to assist in their ability to obtain LEED certification for commercial interiors
- Two-year green power contract to provide electricity from renewable sources
- Use of a water treatment system to maximize energy efficiency and water conservation without the use of harmful chemicals
- Use of paints, adhesives and sealants that reduce volatile organic compounds and over 50% FSC woods
- Installation of low flow toilets and sensed low flow water faucets for an over 40% reduction in water
- Irrigation which uses no potable water and reduces water consumption by 50% through the use of native material and an on-site cistern
- Use of over 20% recycled and regional building materials that reduced waste and environmental impacts during construction
- High performance glazing to reduce solar heat gain and glare while maximizing daylight
- Preferred parking for fuel efficient vehicles